

The diagram consists of two horizontal rows of seven empty rectangular boxes each. The boxes are arranged side-by-side in a single row. A short dashed horizontal line is positioned between the two rows, separating them.

□ □ □ □ □

Nature Magazine AlphaGo Zero paper [1]

α-αγόνων από την Alpha και την γένη της leukotomy στην ιατρική της ομοιότητας

1

A decorative horizontal bar consisting of a series of small, evenly spaced rectangular boxes, likely a separator or a decorative element at the bottom of the page.

talent pool

卡尔·莱蒙德·波普尔 Karl Raimund Popper

[2]

STEM Science, technology, engineering and mathematics

A decorative horizontal bar consisting of a series of small, evenly spaced rectangular blocks.

6.1.1.1.1

Alpha

Deepmind [3] 2017

AlphaGo Zero が AlphaGo Master を破った[4]。AlphaGo Master は 16 該当で AlphaGo Zero は 18 該当。AlphaGo Zero は 14/16 で 45 該当を達成した。

1. Nature Magazime AlphaGo Deepmind AlphaGo Zero AlphaGo Master

2) AlphaGo Zero 本地捕获 local trap AlphaGo Zero 本地捕获 local trap Alpha Go Alpha Alpha Go Alpha Go

AlphaGo Zero 6 game

Superhuman چیزی که این را می‌داند Clock چیزی که IBM S/360 چیزی که
آن را می‌داند AlphaGo Zero چیزی که superhuman IBM S/360 چیزی که superhuman
آن را می‌داند AlphaGo Zero چیزی که Nature Magazine چیزی که AlphaGo Zero paper چیزی که
superhuman چیزی که آن را می‌داند

超人級人工智能 Technological Singularity
Demis Hassabis AlphaGo

AlphaGo Zero AlphaGo Zero superhuman [7] superhuman

superhuman 深層學習 reinforcement learning superhuman 人工智能

AlphaGo Zero AlphaGo Master AlphaGo Master superhuman AlphaGo Master 60 3 AlphaGo Master superhuman AlphaGo Master superhuman AlphaGo Master superhuman [8]

Alpha Alpha Alpha Alpha Alpha Alpha Alpha

Alpha Turing Machine deep-learning Alpha Deepmind AlphaGo Zero AlphaGo Master AlphaGo Zero AlphaGo Zero AlphaGo Zero AlphaGo Zero

Deep-learning reinforcement credit reinforcement reinforcement local trap

leukotomy reinforcement peer review Socratic method peer review Socratic method peer review

ideas are cheap idea cheap reinforcement [9]

AlphaGo reinforcement

AlphaGo reinforcement [10]

[11]

[12]

Turing Machine local trap Universal approximation

Socratic method Superhuman Superhuman

Superhuman

Alan Turing Geoffrey Hinton Demis Hassabis AlphaGo

Demis Hassabis AlphaGo [13] Geoffrey Hinton

Turing Machine Turing Machine Geoffrey Hinton Turing Machine Alan Turing

Dialogue Concerning the Two Chief World Systems [14]

Socratic method [15]

The Sceptical of Chemist

On the Origin of Species

[16]

Leukotomy

personalities mental diseases

personalities BRAIN Initiative

[17]

Leukotomy BRAIN Initiative

Leukotomy

personalities mental diseases personalities BRAIN Initiative

2016 Leukotomy 中国科学院脑科学与类脑智能研究 承担 BRAIN Initiative 中国科学院 AlphaGo 中国科学院脑科学与类脑智能研究

3. **personality** \sqcap **intelligence** \sqcap **consciousness** Walter Freeman \sqcap **consciousness**
personality \sqcap **intelligence** \sqcap **consciousness**

BRAIN Initiative project NIH BRAIN 2025 Report “there is general agreement that types can be defined provisionally by invariant and generally intrinsic properties” invariant agreement insights “envision an integrated, systematic census of neuronal and glial cell types” dynamic brain mapping “Link brain activity to behavior” “Produce conceptual foundations for understanding the biological basis of mental processes” mental processes behavior

BRAIN Initiative project 项目旨在研究大脑如何影响性格和智力
通过脑成像技术研究性格和智力
揭示隐藏假设

personality → intelligence →

□ BRAIN Initiative project □ brain mapping □ mental diseases □ personality □ intelligence □ leukotomy □

leukotomy Alpha

个性智力和精神疾病 personality intelligence mental diseases

BRAIN Initiative ◻ brain mapping ◻
human level intelligence ◻
personalities ◻ intelligence ◻ mental diseases ◻
BRAIN Initiative ◻ neurosciences ◻
AlphaGo ◻ generic human intelligence ◻
Alpha ◻
neurosciences ◻ [18] ◻

1

AlphaGo Zero は、AlphaGo Master が開発した棋譜データを学習して棋力を向上させた結果、AlphaGo Zero がAlphaGo Master の棋力を上回る結果となりました。AlphaGo Zero は、AlphaGo Master が開発した棋譜データを学習して棋力を向上させた結果、AlphaGo Zero がAlphaGo Master の棋力を上回る結果となりました。

Technological Singularity BRAIN Initiative project

Technological Singularity □ baseless □□

AlphaGo Zero achieved superhuman performance

~ ~ ~ ~ ~ ~ ~ ~ ~ ~

[2] 二〇一〇年十一月二日
二〇一〇年十一月二日

[3] 『Cracking Go』 Deep Blue AlphaGo Alpha

[5] AlphaGo Master 三星杯AlphaGo Master 三星杯

[6] 未来社会の超人化（superhuman）とAlpha社会

A horizontal row of twelve empty square boxes, intended for children to write their names in, likely as part of a classroom activity.

Alpha Go 由 Google DeepMind 开发，是 AlphaGo Zero 和 AlphaGo 的升级版。它在围棋比赛中达到了人类水平的人工智能。Alpha Go 在围棋比赛中击败了世界冠军李世石和柯洁。

Google/Deepmind Alpha Go چیست؟

[7] <http://www.alphago-games.com/> Full Strength of Alphago Zero, i.e. Final Form
40 Blocks 20 Blocks Not Full Strength of Alphago Zero
Alphago Zero superhuman

[10] 『玩游戏』：“Go gaming is strictly defined within a very small space. Industrial automations are typically designed in well controlled environments, but not strictly defined. Car driving is regulated, but the environment is not well controlled”『玩游戏』『工业自动化』『驾驶汽车』

[11] Alpha Go AlphaGo Master 60+3

Alpha

[13] AlphaGo Master AlphaGo AlphaGo AlphaGo AlphaGo Alpha

[14] Dialogue Concerning the Two Chief Word Systems 两学记 Socratic Method
苏格拉底对话录

AlphaGo

A decorative horizontal bar consisting of a series of small, evenly spaced rectangular blocks.

[15] Alpha Alpha Alpha Alpha Alpha Alpha Alpha Alpha

脳科学研究開発プログラム BRAIN Initiative project Alpha プロジェクト
β

[16] Leukotomy による BRAIN Initiative project の実施とその影響 BRAIN Initiative

[17] 二〇一〇年十一月三十日
二〇一〇

我沒有越過科學和宗教的邊界；哥德爾的定理顯示，人類的形而上學可能無法奏效。

[18] Alpha